

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB2004/002268

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F02B75/00 F01B17/02 F02D17/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F02B F01B F02D F01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

8 September 2004

Date of mailing of the international search report

15/09/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/002379 A1 (SCHECHTER MICHAEL M) 31 May 2001 (2001-05-31)	1-5, 8-11, 13-16, 19, 21-31, 35,36, 38,40-44
A	figures 1-16c paragraph '0002! paragraph '0013! paragraph '0028! paragraph '0030! paragraph '0033! paragraph '0074! - paragraph '0078! paragraph '0085! paragraph '0098! paragraph '0187! paragraph '0192! paragraph '0239! paragraph '0241! paragraph '0254!	2-23, 25-28, 30-39
A	----- WO 01/46571 A (COPLAND EDWARD THOMAS LEWIS ; ALLEN JEFFREY (GB); LOTUS CAR (GB); LAW) 28 June 2001 (2001-06-28) figures 1-7 abstract claims 1-8	1,24,29, 40,45
A	----- SCHECHTER M M: "NEW CYCLES FOR AUTOBOBILE ENGINES" SAE TECHNICAL PAPER SERIES, SOCIETY OF AUTOMOTIVE ENGINEERS, WARRENDAL, PA, US, March 1999 (1999-03), pages 1-10, XP001089612 ISSN: 0148-7191 the whole document	1,24,29, 40,45
A,P	----- FR 2 836 181 A (PEUGEOT CITROEN AUTOMOBILES SA) 22 August 2003 (2003-08-22) figures 1-4 abstract page 1, line 21 - line 22 claims 1-7	1,24,29, 40,45-51
	----- -/--	

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PCT/GB2004/002268

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 958 900 A (UENO TAKAHIRO) 25 May 1976 (1976-05-25) figures 1-12 abstract claims 1,2 column 10, line 51 - line 66 column 15, line 3 - line 58 column 14, line 13 - line 36 -----	1, 29, 40, 45
A	US 4 473 047 A (GUTMAN NATHAN ET AL) 25 September 1984 (1984-09-25) figure 1 abstract claims 1-12 column 4, line 24 - line 29 -----	1, 2, 9, 13, 29, 30, 34, 45

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB2004/002268

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2001002379	A1	31-05-2001	US 6223846 B1	01-05-2001
WO 0146571	A	28-06-2001	WO 0146571 A1	28-06-2001
			WO 0146572 A1	28-06-2001
			WO 0146573 A1	28-06-2001
FR 2836181	A	22-08-2003	FR 2836181 A1	22-08-2003
US 3958900	A	25-05-1976	JP 50020148 A	03-03-1975
			JP 50022313 A	10-03-1975
			JP 50022909 A	12-03-1975
			JP 51017707 A	12-02-1976
			GB 1480247 A	20-07-1977
			DE 2431828 A1	30-01-1975
			FR 2257782 A2	08-08-1975
			JP 1245719 C	25-12-1984
			JP 50029906 A	26-03-1975
			JP 59020855 B	16-05-1984
			US 3963379 A	15-06-1976
US 4473047	A	25-09-1984	AT 12292 T	15-04-1985
			AU 543879 B2	09-05-1985
			AU 6500780 A	29-10-1981
			CA 1164290 A1	27-03-1984
			DE 3070346 D1	25-04-1985
			DK 511880 A , B,	26-08-1981
			EP 0034681 A1	02-09-1981
			ES 8202397 A1	16-04-1982
			IE 50410 B1	16-04-1986
			IN 153450 A1	14-07-1984
			JP 1346477 C	13-11-1986
			JP 56118530 A	17-09-1981
			JP 61014335 B	18-04-1986
			MX 6892 E	07-10-1986
			ZA 8007495 A	25-11-1981